



Cotton/Soybean Insect Newsletter

Volume 14, Issue #6

Edisto Research & Education Center in Blackville, SC

28 June 2019

Pest Patrol Alerts

The information contained herein each week is available via text alerts that direct users to online recordings. I will update the short message weekly for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter “y” to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

Updates on Twitter

When noteworthy events happen in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at @bugdocisin on Twitter.



Scouting Workshops

Your ag-focused county agents and I will be offering some in-field scouting workshops for cotton and soybean insects this summer. The trainings will be free to attend, start in the morning, include lunch, and end shortly after that. The dates for those interactive workshops are:

- 18 July 2019 in Cameron, SC. The flyer for that will be attached to the email for this newsletter.
- 25 July 2019 at the Lowrys Community Center. More details soon on this one.
- 31 July 2019 possible date for workshop at Edisto REC near Blackville, SC. Details soon.

Stay tuned for more information!

News from Around the State

Jay Crouch, county agent covering much of the upstate, reported that he “scouted a good bit of cotton today (27 July)...cotton is beginning to bloom. I found nearly no plant bugs, a large number of lady beetles, moderate populations of false chinch bugs, and a mixture of spiders. Overall, cotton looked really good, but will soon need rain.”

Cotton Situation

As of 23 June 2019, the USDA NASS South Carolina Statistical Office estimated that about 100% of the crop has been planted, compared with 99% the previous week, 99% at this time last year, and 99% for the 5-year average. About 42% of the crop is squaring, compared with 25% at this time last week, 22% at this time last year, and 25% for the 5-year average. The condition of the crop was described as 3% excellent, 61% good, 30% fair, 6% poor, and 0% very poor. These are observed/perceived state-wide averages.

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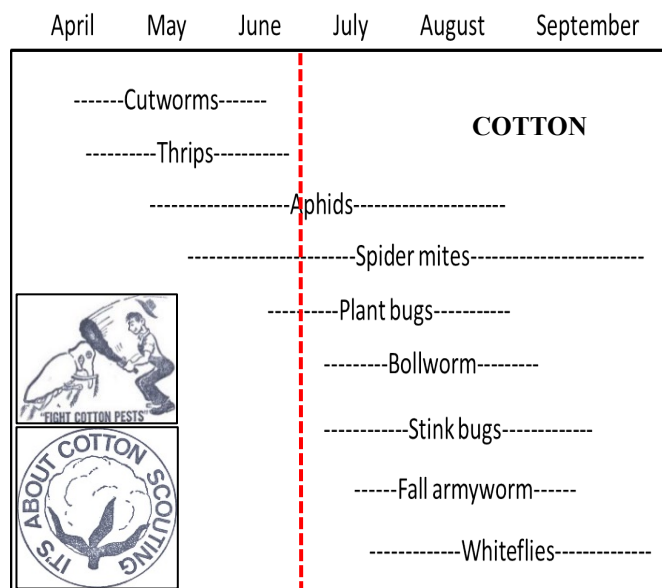
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Cotton Insects

Notice how our current place in time on the chart to the right goes right through aphids, spider mites, and plant bugs and nothing else? That's spot on for where we are with arthropods in cotton. I will not say "nothing else matters," but we are primarily dealing with those pests right now. I am certainly getting plenty of calls about aphids, spider mites, and plant bugs. Most folks are not seeing plant bugs at threshold levels. Many are asking about aphids and what we should do. Below are our recommendations for managing aphids in cotton. Pay particular attention to the language about natural control agents (predators, parasitoids, and a fungus), as those can provide us with good control of populations that seem like they are about to get out of control. In the past, I have seen many sprays go out for aphids and then the fungus take them out just as effectively a few days later in an adjacent field. So, you need to have multiple stressors on the crop to pull the trigger on spraying. But, you also need to know that we do have some populations that are tolerant to the neonics (most of the materials recommended below). Charted data from the last two good trials I conducted on insecticide efficacy are on the next page.



APHIDS

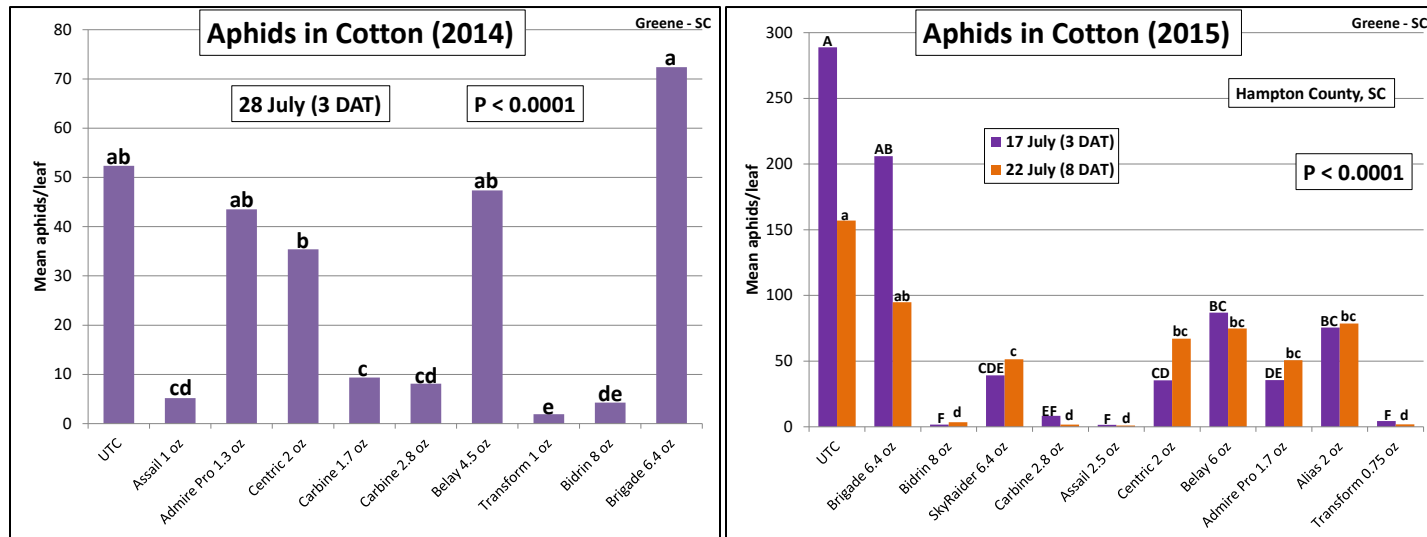
Product	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
acetamiprid		0.025-0.05		12 hr	28 d	Ovicidal activity on caterpillars
Assail 30 SG	1.5-2.5 oz		-			
Assail or Intruder 70 WP	0.6-1.1 oz		-			
dicrotophos		0.5		6 d	30 d	16 oz limit post bloom
Bidrin 8	8.0 oz		16			
flonicamid		0.044-0.088		12 hr	30 d	
Carbine 50 WG	1.4-2.8 oz		-			
thiamethoxam		0.031-0.05		12 hr	21 d	5 oz limit for season
Centric 40 WG	1.25-2.0 oz		-			
imidacloprid		0.031-0.0625		12 hr	14 d	
Couraze 4 F	1.0-2.0 oz		64-128			
Couraze 2 F	2.0-4.0 oz		32-64			
Admire Pro 4.6	0.9-1.7 oz		75-142			

Treat only when high numbers of aphids are severely infesting plants, populations are building, and the margins of terminal leaves are drooping. Aphids will cause more damage when plants are suffering from lack of moisture, and there are few signs of natural control agents. If there is evidence of widespread parasitism (dead aphids, tan colored and swollen in appearance) and/or fungal pathogens (diseased aphid bodies have a grayish-green colored fuzzy appearance) an insecticide should not be applied. Avoid unnecessary insecticide applications, as subsequent reductions in beneficial populations can result in damage from bollworm and fall armyworm.

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It looked like we had some tolerance to some neonic active ingredients several years ago. Acetamiprid (Assail) has always been a good material, as has flonicomid (Carbine), dicotophos (Bidrin), and sulfoxaflor (Transform), but please note that Transform is not labeled for use on cotton without a Section 18 (emergency use). We applied for that Section 18 for TPB and have not heard back yet, so Transform use in cotton is not legal in SC in 2019. If I had to spray for aphids...HAD to, I would probably use acetamiprid (Assail) or flonicomid (Carbine), but please note that these materials are relatively weak on tarnished plant bug. So, any attempt to control aphids and plant bugs with the same material might disappoint. Dicotophos (Bidrin) is usually good on aphids, but you don't want to spray Bidrin this early, as it will likely result in a significant premature disruption of beneficial arthropods right before we get a flight of bollworm out of corn. Save that material for control of stink bugs later.

As I mentioned in previous issues of the newsletter this season, cotton aphid is capable of transmitting a virus (cotton leaf roll dwarf virus - CLRDV) to cotton that can result in a disease called Cotton Blue Disease. I dislike that name, but, apparently, it gets that name from one of the symptoms where the leaves are darkened to a bluish color. The other symptoms are tightly stacked nodes, cupped and crinkled leaves, and other discolorations. There are photos of the symptoms in previous issues of the newsletter. We will be looking at this closely this season and researching many aspects of cotton aphid as a vector of this virus and disease. Despite the news of this virus and potential yield loss, we should not spray every cotton field with scattered pockets of aphids. As I mentioned earlier, I have seen copious amounts of data clearly showing that, for the most part, aphid sprays don't pay for themselves. That being stated, we do need to carefully watch aphids and work with your county agent and consultant (call me also, if you want) on decisions to spray for aphids. There are instances where we do need to treat, and those are usually very bad situations with too much stress on the plant. Next week might add too much stress in places with the heat and lack of rain, so let's do this field by field, and get it right.

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Spider mites are probably going to get bad again soon, as chances of rain in the weather forecast keep diminishing every day, it seems. So, again, get out there and look for the stippling on the upper surface of leaves around the venation and pale areas underneath the leaves between the leaf venation, where mites and eggs will be.

So far this season, populations of the tarnished plant bug (TPB) around the state have been variable. That pest is truly one that must be scouted for and managed field by field. If you spray the entire farm because one field was close to threshold, you are likely wasting money on many of the acres. Very few of the fields my crew and I have surveyed have had populations at threshold (8 TPB/100 sweeps). Most of the issues with square retention have been related to the weather so far.

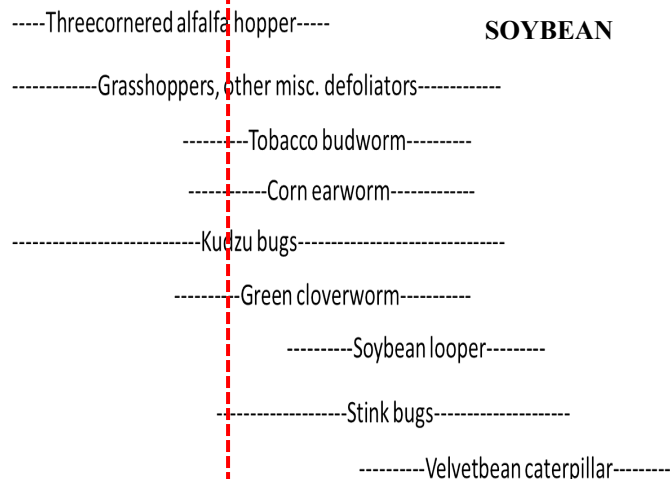
Soybean Situation

As of 23 June 2019, the USDA NASS South Carolina Statistical Office estimated that about 77% of the crop has been planted, compared with 69% the previous week, 93% at this time last year, and 88% for the 5-year average. About 63% of the crop has emerged, compared with 52% the previous week, 83% at this time last year, and 79% for the 5-year average. The condition of the crop was described as 1% excellent, 76% good, 22% fair, 1% poor, and 0% very poor. These are observed/perceived state-wide averages.

Soybean Insects

Kudzu bugs remain the most numerous insect in

April May June July August September October



our sampling this week, and we are still picking up quite a few redbanded stink bugs (RBSB) in our samples. Check out last week's newsletter for pictures of RBSB and more of a description about this species. Here is a shot of our planting date study from the air. Notice the deer fence? When you plant soybeans in April, the deer – our #1 pest so far this season – hone in on them pretty quickly.

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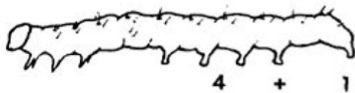
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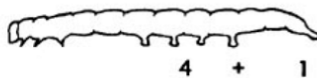


It is never too early to start talking about identifying caterpillars and moths. Know these major species:

FIELD KEY TO COMMON SOYBEAN CATERpillARS



CORN EARWORM
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



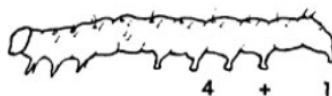
VELVETBEAN CATERPILLAR
4 + 1 pair prolegs
Very active when handled



SOYBEAN LOOPER
2 + 1 pair prolegs
Fatter at tail end
Looping movement



GREEN CLOVERWORM
3 + 1 pair prolegs
Not fatter at tail end
Looping movement



TOBACCO BUDWORM
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



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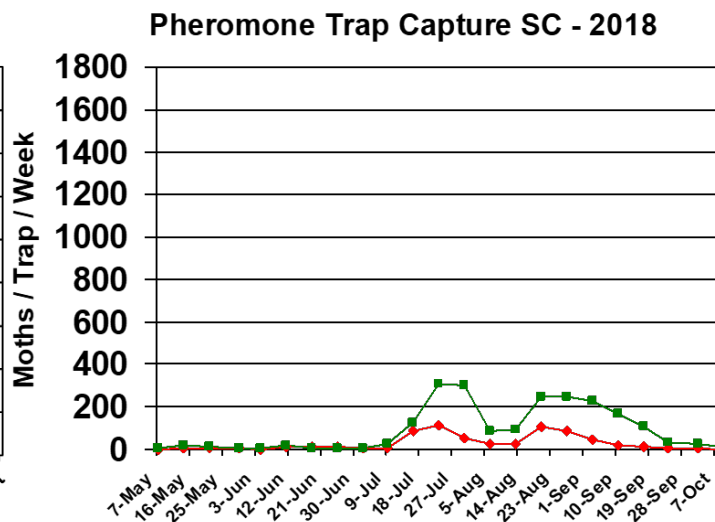
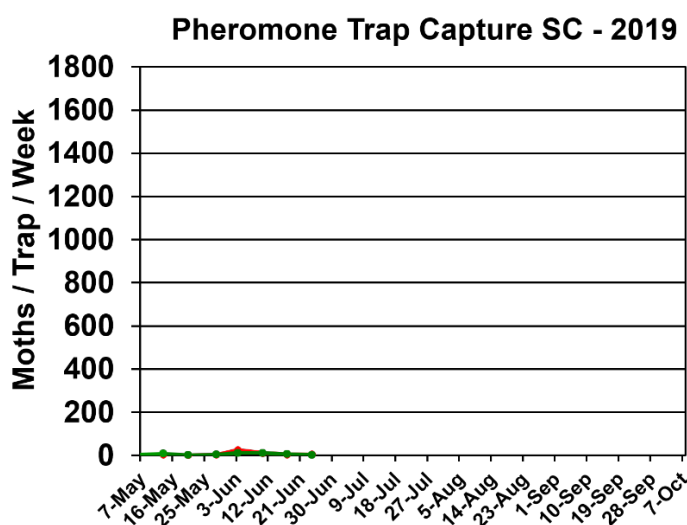
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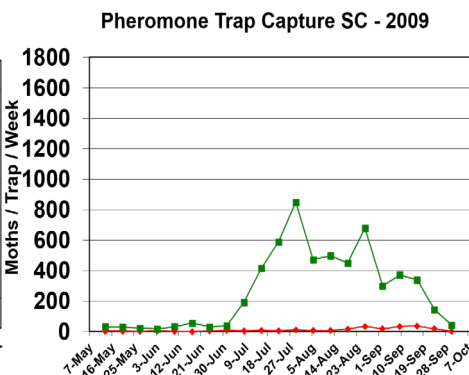
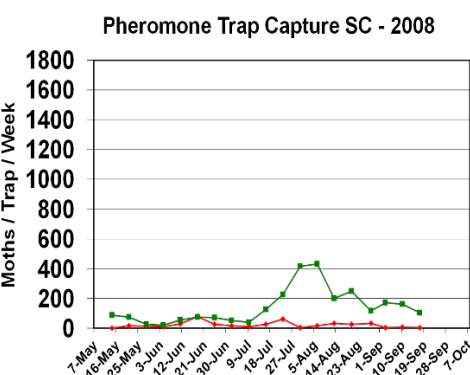
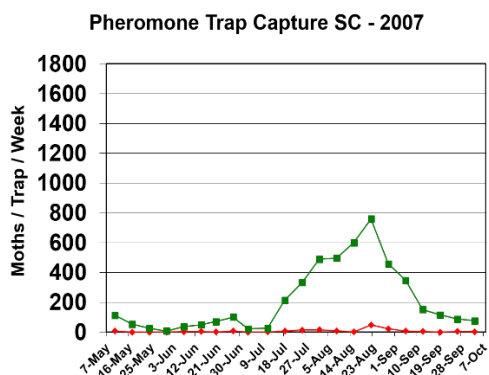
Bollworm & Tobacco Budworm



Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2018 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.



Trap data from 2007-2017 are shown below for reference to other years of trapping data from EREC:



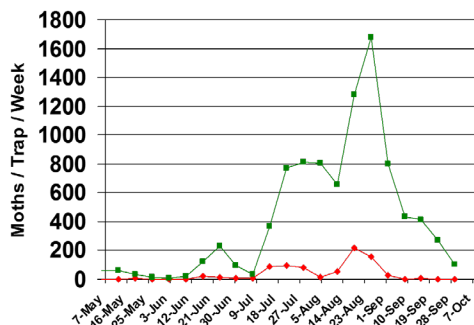
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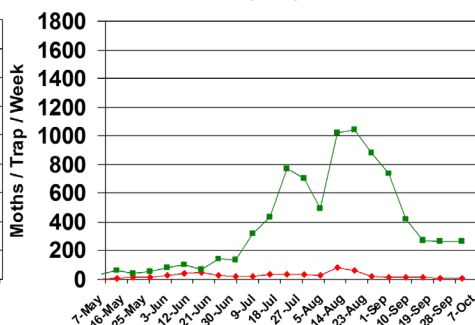
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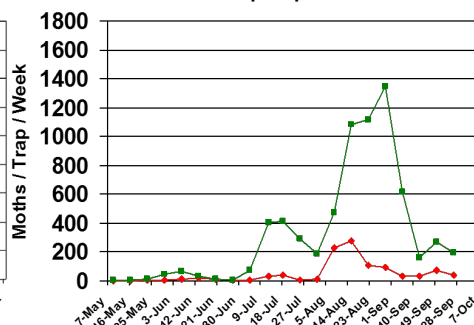
Pheromone Trap Capture SC - 2010



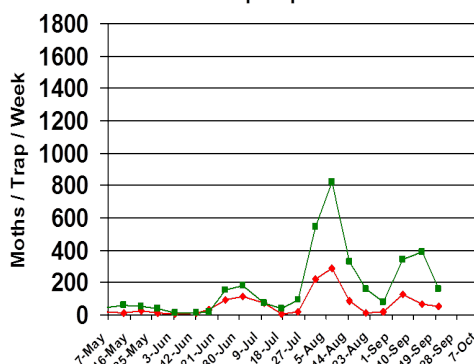
Pheromone Trap Capture SC - 2011



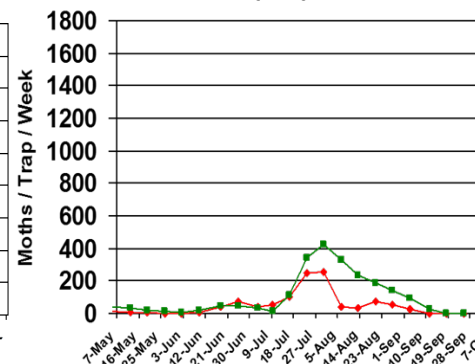
Pheromone Trap Capture SC - 2012



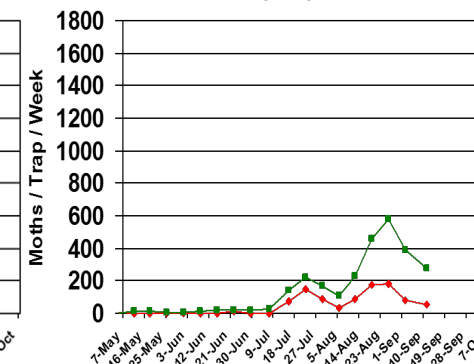
Pheromone Trap Capture SC - 2013



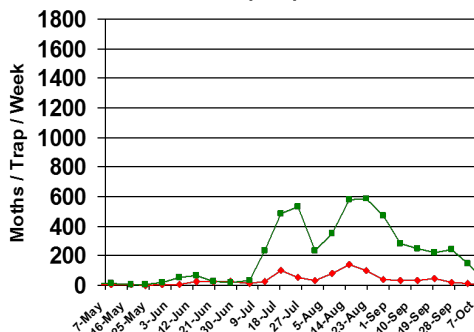
Pheromone Trap Capture SC - 2014



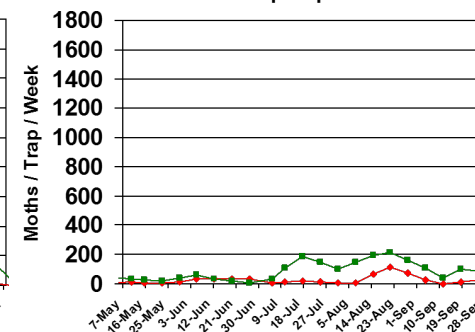
Pheromone Trap Capture SC - 2015



Pheromone Trap Capture SC - 2016



Pheromone Trap Capture SC - 2017



Pest Management Handbook – 2019

Insect control recommendations are available online in the 2019 South Carolina Pest Management Handbook at:

<https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html>

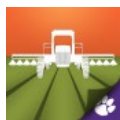
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Free Mobile Apps: “Calibrate My Sprayer” and “Mix My Sprayer”



Download our free mobile apps called “Calibrate My Sprayer” and “Mix My Sprayer” that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):

<http://www.clemson.edu/extension/mobile-apps/>

Need More Information?

For more Clemson University Extension information: <http://www.clemson.edu/extension/>

For historical cotton/soybean insect newsletters:

<https://www.clemson.edu/extension/agronomy/cotton1/newsletters.html>

Sincerely,

Jeremy K. Greene, Ph.D.
Professor of Entomology



Visit our website at:
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